

STATE OF MONTANA MONTANA DEPARTMENT OF TRANSPORTATION JOB PROFILE AND EVALUATION

SECTION I - Identification

Working Title: Department:

Assistant District Bridge Inspection Manager Transportation

Class Code Number: 131855 Division & Bureau:

District Engineering

Class Code Title: Project Facilitation Specialist Section & Unit:

Pay Band: 5 Work Address: District only

Glendive

Position Number: TBD (by each District) Phone: 406-345-8207

☐ FLSA Exempt ☐ FLSA Non-Exempt

Profile Completed By: Work Phone: Bridge Inspection Panel 406-444-6260

Kent Barnes-

Debby Williams 406-444-6945

Human Resources Specialist

Brian Cameron 406-442-4934

CMS, LLC

Work Unit Mission Statement or Functional Description:

The MDT's mission is to serve the public by providing a transportation system and services that emphasize quality, safety, cost effectiveness, economic vitality and sensitivity to the environment.

DESC: District Bridge Inspection

Describe the Job's Overall Purpose:

The Assistant District Bridge Inspection Manager is responsible for assisting the District Bridge Inspection Manager in directing and overseeing bridge inspection and analysis projects throughout the District. Duties include project planning and management; providing administrative and technical oversight, quality assurances, and engineering expertise; assist in the management of the ongoing operations and activities of the work unit; and performing a variety of other duties as assigned. The

incumbent reports to the District Bridge Inspection Manager and will supervise a variable number of seasonal staff in the absence of the Bridge Inspection Manager (avg. 2.5 FTE).

SECTION II - Major Duties or Responsibilities

% of Time

A. INSPECTION PROJECT MANAGEMENT

85%

- 1. Collaborates in planning and managing bridge inspection and analysis projects within the District to ensure the overall quality, efficiency, and cost-effectiveness of projects. Helps to evaluate current and projected workflow, relative complexity of inspections (e.g., fracture critical, pin and hanger, snooper, emergency etc.), and available resources to determine priorities, staff/consultant assignments, and project specifications. Monitors projects to measure progress, resolve problems, and ensure timely delivery of assigned projects.
- 2. Develops and recommends new procedures, standards, and inspection alternatives to reflect changing project needs, standards, technologies, value engineering principles, and available human and equipment resources. This involves ongoing research and evaluation of new developments in structural engineering, collection methods and technologies, and changing project needs (e.g., safety, efficiency, cost-effectiveness, etc.) to recommend enhancements to the District's bridge inspection function.
- 3. Conducts and collaborate in the coordination of bridge inspection activities to analyze bridge deficiencies and problems and facilitate the development of engineering solutions. Reviews the work of staff and consultants involved with bridge inspection and analysis projects to ensure the overall quality of work procedures and products as well as compliance with project specifications. This involves explaining and monitoring project needs, Department procedures and standards, and project requirements; reviewing work products and reporting technical or procedural problems to the District Bridge Inspection Manager.
- 4. Collaborates in the assessment and resolution of complex project management problems, identifies project resource needs, and assists the District Bridge Inspection Manager in coordinating the exchange of accurate, current information among contractors, District and Department staff, local governments, members of the public, and others associated with inspection projects. Serves as a resource in the resolution of inspection-related problems. This includes evaluating problems related to inspection methods, compliance with standards, quality controls, and other issues; interpreting project requirements and applicable laws and regulations; negotiating among various parties to resolve disputes; and developing solutions to problems referred by the District Bridge Inspection Manager, consultants, and project managers.
- 5. Develops analytical reports of inspection methods, findings, and recommendations to assess structural condition, examine structural deficiencies, prevent or mitigate adverse factors (e.g., fractures, scour, etc.), evaluate engineering alternatives, and implement corrective actions. This includes assisting in the coordination with MDT managers, local/county officials, and others to implement corrective actions.
- 6. Collaborates in implementing ongoing quality controls for inspection methods, procedures, and results to develop new approaches to various design needs and impediments, resolve process deficiencies (e.g., communication, technologies, etc.), and recommend procedures and standards that promote quality, efficiency, and cost-effectiveness. This includes coordinating with other Districts' Bridge Inspection Managers, centralized staff and managers, local/county officials, FHWA representatives, private consultants, and others to develop and maintain uniform standards, resolve common problems, and optimize resources.

Form Revision Date: 04-20-04

- 7. Coordinates with centralized staff, other Districts, and MDT managers to evaluate new bridge inspection methods and technologies, operational efficiencies, cost-saving measures, safety measures, and other enhancements. At the direction of the Bridge Inspection Manager evaluates evolving trends and technologies; identifies new equipment standards and employee training needs; and recommends how to incorporate new technologies, procedures, regulations, and other issues into District operations.
- 8. In the absence of the Bridge Inspection Manager may be called upon to represents the District at public meetings, professional conferences and workgroups, formal hearings, legal proceedings, and other events to explain, promote, and defend District positions, actions, and interests on various issues (e.g., safety concerns, closures, cost-sharing opportunities, etc.). Responds to emergency assistance requests, complaints, technical questions, and other contacts by local/county officials, District staff, and members of the public.

B. DISTRICT PROGRAM OPERATIONS

10%

- 1. Collaborate in Allocation of human, material, and financial resources among various inspection projects to maximize the quality and efficiency of District bridge inspections. Assists in the Preparation of project budget proposals and amendments for the Engineering Services Supervisor to obtain authority and resources necessary for program operations and activities.
- 2. Collaborate in the coordination of contract negotiations and monitoring to ensure effective contract performance and compliance with specific terms and conditions of individual agreements. Ensures that the scope of contracts reflects appropriate intent and use of funds. Recommends approval, denial, or modifications of inspection-related contract components to ensure that agreements reflect the best interests of the Department and provide sufficient detail for effective monitoring and performance assessment.
- 3. Assists the District Bridge Inspection Manager to determine and fulfill supply, equipment, and vehicle procurement needs of the District Bridge Inspection Program, including assistance in developing specifications, ensuring compliance with Department procurement practices, developing budget justifications and submitting requests, and integrating equipment into District practices to ensure maximization of resources.
- 4. Ensures adherence to Department, state, and federal safety standards and procedures to protect project staff, materials, and the public from hazards associated with bridge inspection and analysis. This duty involves coordination with District supervisors, inspectors, maintenance personnel, and others to inform staff and contractors of changing safety protocols, limitations and capabilities of inspection equipment, site-specific characteristics, unusual or modified procedures, and other issues that affect the safety of project staff and the traveling public.

C. <u>SUPERVISION</u> 2.5%

- 1. In the absence of the Bridge Inspection Manager, supervises a variable number of permanent and seasonal bridge inspection personnel (avg. 2.5 FTE) involved with ongoing bridge inspections, analyses, and reporting. Assists in conducting staff meetings, disseminates data, and promotes information exchange for support and advancement of District and Department goals.
- 2. Assists in recommendation and justification requests for additional personnel as necessary.

- 3. Recommends training programs for subordinate staff and provides ongoing guidance and technical assistance as necessary.
- 4. In the absence of the Bridge Inspection Manager performs a variety of other supervisory responsibilities, including signing time slips and approving leave requests, maintaining filing systems, ensuring the effective distribution of reports and documentation, and other tasks necessary to ensure the effective administration and operation of project responsibilities.

D. OTHER DUTIES 2.5%

This position performs a variety of other duties as assigned by the District Bridge Inspection Manager in support of the Department mission and Division objectives. This includes exchanging information with consultants, agency staff, and the public; providing training, education, and professional and technical assistance; directing special projects; participating in ongoing training and educational programs; and performing a variety of other duties as directed.

Specific examples of problems solved decisions made or procedures followed when

2. Specific examples of problems solved, decisions made, or procedures followed when performing the most frequent duties of this position include:

The incumbent is responsible for determining optimum inspection methods, equipment, workforce requirements, and project parameters (e.g., safety protocols, quality assurances, etc.) based upon different inspection types, structures, locations, and other factors. The position analyzes test results, engineering standards, and complex site-specific characteristics (e.g., structural design, materials, environmental impacts, etc.) to ensure the quality and defensibility of inspection methods, procedures, and results. The position is also responsible for analyzing engineering data to assess overall structural condition, risks, and corrective actions and alternatives.

3. The most complicated aspect of this position is:

The most complex aspect of the position involves analysis and evaluation of project plans, engineering standards, District objectives, available resources, and other factors to effectively plan major bridge inspection projects. As one of the District's technical authority in bridge inspections, the position is expected to evaluate and recommend solutions to complex and sometimes unprecedented problems. For example: This position is the front line person in evaluating and making recommendations, actions taken as bridges deteriate or are damaged.

- 4. Guidelines, manuals, or written procedures that support this position include:

 Laws, regulations, guidelines, manuals or other written established procedures available to the incumbent include design and construction specifications, Engineering Division policies and practices, State and federal standards, American Association of State Highway Transportation Officials (AASHTO), Standard Montana Specifications for Road and Bridge Construction, and manuals for the various bureaus and units of the Division (e.g., Materials, Construction, Right of Way, Bridge, Preconstruction, etc.). AASHTO Specifications, Bridge Design Manual, and industry standards are used for general guidance. The position may refer to technical specifications and operations manuals related to specialized inspection tools, equipment, and vehicles.
- 5. Which of the duties and/or specific tasks listed under 1. (above) are considered "essential functions" that must be performed by this position (with or without

accommodations)? (If you need information or training on the identification of essential functions, please contact MDT Human Resources Division.)

The following duties are considered essential functions because they require specialized expertise and skill and are the primary reasons the job exists:

Duty A: Support and assistance for Inspection Project Management

Duty B: Support and assistance in District Operations

Duty C: Assistance in Supervision

The following mental and physical demands are associated with these essential functions:

PHYSICAL

- Lifting objects weighing up to 50 lbs.
- Ability to walk over uneven terrain or in water, climb structures spanning significant heights (i.e., 100+ feet), and effectively utilize safety equipment (e.g., ropes, hardhats, etc.)
- Extensive travel within the state to project locations (over 1,000 miles per month)
- Operating a personal computer
- Communicate in writing, in person, and over the phone

MENTAL

- Deal with the public on a regular basis
- Ability to multi-task
- Demands for accuracy in all aspects of work
- Ability to meet inflexible deadlines
- Decision making that affects public health and safety
- · Computing arithmetic operations
- Comparing data
- Compiling information
- Analyzing
- Coordinating
- Synthesizing
- Instructing

Predominant work is performed in the office and in the field, involving:

- Exposure to heavy vehicles and equipment
- Exposure to extreme heights
- Exposure to high speed traffic
- Exposure to dynamic weather conditions

6.	Does this position supervise others?	☐ Yes	⊠ No	- MAY SUPERVISE 2.5% OF
THE	TIME IN THE ABSENCE OF THE DISTRICT	BRIDGE I	NSPECT	ION MANAGER.

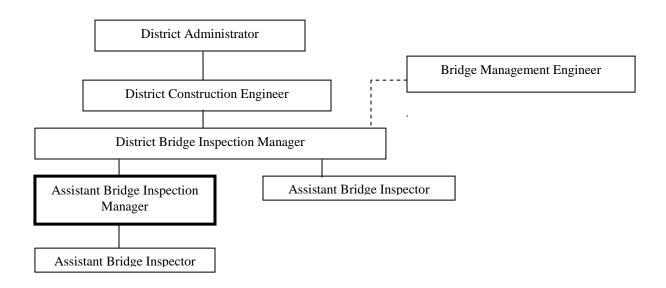
Number directly supervised: 0 Complexity level of the positions supervised: Position Number(s) of those supervised:

00000 TITLE

7. This position is responsible for:

☐ Hiring ☐ Firing	Supervision	☐ Pay Leve
☐ Performance Management	Promotions	☐ Discipline
Other:		

8. Attach an Organizational Chart.



SECTION III - Minimum Qualifications - List minimum requirements for the first day of work.

Critical knowledge and skills required for this position:

KNOWLEDGE:

This position requires extensive knowledge of the principles and practices of structural inspection, testing, and analysis; non-destructive testing techniques; structural engineering principles; project development and management methods; methods and techniques of highway construction; extensive knowledge of various site-specific characteristics and their potential effects on structural condition (e.g., temperature, weather conditions, scour, etc.); safety practices OSHA regulations; and contract administration.

SKILLS:

This position requires skill in directing, organizing, and coordinating multiple staff and projects, complex inspection and analysis procedures, and a variety of equipment; adapting inspection methods and techniques to meet various site-specific circumstances; and operating of a variety of inspection tools, equipment, and vehicles. Effective written and verbal communication skills are also required in communicating technical information and project plans with inspectors, contractors, and Department staff; developing technical reports and recommendations; and directing and coordinating a variety of training activities. This position further requires skill in the use of standard office software applications (i.e., word processing, spreadsheet, scheduling, etc.).

Behaviors required to perform these duties?

- Leadership: Provides clear directions, technical assistance, and guidance to inspection
 crews to ensure effective operations and project activities. Keeps supervisors informed of
 critical and routine issues. Motivates staff to achieve common objectives.
- **Analytical/Interpretive Thinking:** Accurately applies general engineering standards and project requirements to specific inspection and analyses.
- Decision Making: Evaluates multiple and ambiguous factors to resolve problems.
 Develops technically and legally defensible courses of action in response to structural deficiencies.
- **Communication:** Translates technical information to audiences of varied technical levels; communicates effectively with Division and Department staff, contractors, local governments and the public verbally and in writing.
- **Independence of Action:** Determines appropriate responses to structural engineering deficiencies and project management problems with minimal assistance or precedent.

CORE VALUES – GENERIC BEHAVIORS 4/3/06

CUSTOMER ORIENTATION/SERVICE (P.11-12)

Creates an atmosphere in which timely and high quality information flows smoothly between self and customer. Encourages open, honest, and constructive expression of ideas and opinions. Demonstrates active listening skills. Uses appropriate body language. Seeks to understand others' viewpoint. Analyzes the customer needs and adjusts to the perspective of the customer, when appropriate.

DECISION MAKING (P. 22)

Independently takes action and responsibility for solving problems. Makes decisions designed to achieve desired outcomes. Challenges the status quo by taking calculated actions in complex, ambiguous, contentious, or hazardous situations to force an issue or set a direction.

PERSONAL ACCOUNTABILITY AND OWNERSHIP (P. 31)

Takes pride in the job. Actively engages in professional self-development opportunities. Accepts individual responsibility for all actions taken.

LEADERSHIP (P. 35)

Shares information, feedback, and knowledge (two-way communication) with key persons inside and outside of the organization to ensure successful project outcomes and/or improvement. Includes training, teaching, and coaching others. Actively steps into a leadership role.

ETHICS (P. 44)

Models high standards of honesty, integrity, trust, and openness. Knows, understands, and follows through with the correct standards of conduct and moral judgment required; is willing to act outside the norm when needed to adhere to ethical principles. Communicates and demonstrates actions in a consistent manner. Respects others, regardless of individual capabilities, agendas, opinions or needs.

FLEXIBILITY AND ADAPTABILITY (P. 49)

Accepts change as a healthy and normal part of growth. Receptive to new information and recognizes the validity of various viewpoints; sees situations objectively. Responds positively to changes in direction and priorities, responsibilities or assignments. Adjusts to multiple demands, priorities, ambiguity, and change positively. Works effectively within a variety of situations, individuals, or groups.

TEAMWORK (P. 50)

Works cooperatively with others as part of a team as opposed to separately or competitively.

CREATIVITY AND PROBLEM-SOLVING (P. 59)

Generates ideas, fresh perspectives and original approaches; open-minded. Uses creativity and originality when problem-solving. Goes beyond traditional ways to address issues and problems.

beyond traditional ways to address issues and problems.						
Education: Check the <u>one box</u> indicating minimum educatio first day of work:	n requirements for this position for a new employee the					
	Related AAS/2-years college/vocational training Related Bachelor's Degree Related Master's degree					
Please specify the acceptable and related fields of study:						
Required/Acceptable: Civil Engineering, Construction Technology						
Related: Engineering discipline that qualifies for registration as a Professional Engineer (PE).						
Other education, training, certification, or licensing required (specify): The position must successfully complete an approved Bridge Inspection Team Leader Certification program.						
Experience:						
Check the <u>one box</u> indicating minimum work-related experience requirements for this position for a new employee the first day of work:						
☐ No prior experience required☐ 1 to 2 years						
Other specific experience (optional): Experience must include one (1) year of bridge inspection experience for candidates with a PE. Without a PE the experience (3 to 4 years) must be in the fields of in-service bridge inspection or bridge construction inspection or a combination thereof.						

Alternative Qualifications:

This agency will accept alternative methods of obtaining necessary qualifications.

Alternative qualifications include: Candidates certified as a Bridge Inspection Team Leader in accordance with federal requirements will be considered as qualified for this position.

SEE BELOW:

- 1 Be a registered professional engineer, or have ten years bridge inspection experience (If registered PE, Montana requires at least 1 year of bridge inspection experience), *and* have successfully completed a Federal Highway Administration (FHWA) approved comprehensive bridge inspection training course.
- 2. Have five years of a combination of bridge inspection experience and bridge construction inspection experience **and** have successfully completed an FHWA approved comprehensive bridge inspection training course;

- 3. Be certified as a Level III or IV Bridge Safety Inspector under the National Society of Professional Engineer's program for National Certification in Engineering Technologies (NICET) *and* have successfully completed an FHWA approved comprehensive bridge inspection training course;
- 4. Have a bachelor's degree in engineering from a college or university accredited by or determined as substantially equivalent by the Accreditation Board for Engineering and Technology, have successfully passed the National Council of Examiners for Engineering and Surveying Fundamentals of Engineering examination, have two years of bridge inspection experience, *and* have successfully completed an FHWA approved comprehensive bridge inspection training course;
- 5. Have an associate's degree in engineering or engineering technology from a college or university accredited by or determined as substantially equivalent by the Accreditation Board for Engineering and Technology, have four years of bridge inspection experience; *and* have successfully completed an FHWA approved comprehensive bridge inspection training course.

SECTION IV - Other Important Job Information

Information regarding Alternative Qualifications:

This comes directly from the Code of Federal Regulations governing the National Bridge Inspection Standards (NBIS) with a couple of qualifications:

Path 1 by FHWA requirements a person who is registered as a professional engineer only needs the two week class to become an inspection team leader. The fact is a person can become registered as a professional engineer and never work in the field of bridge engineering. So in Montana we qualified this requirement to include at least one year of bridge inspection experience.

Path 2 by FHWA requirements requires 5 years of bridge inspection experience and the two week class. Several years ago we received FHWA Division Office's concurrence and approval to count time spent building bridges to qualify toward the 5 years of bridge inspection experience. At that time we were inspecting bridge only during the construction off-season, meaning that we were inspecting around 3 to 4 months a year. At that rate it would have taken an inspector at least 15 years to get the full five years of bridge inspection experience, and that was way too long to wait to get someone qualified. So we got the time spent as an inspector on bridge construction projects to count toward the 5 year requirement.

SECTION V – Signatures				
Signature indicates this statement is accurate and complete.				
Employee:				
Name:	Title:			
Signature:	Date:			
Immediate Supervisor:				
Name:	Title:			
Signature:	Date:			
Division/District Administrator:				
Name:	Title:			
Signature:	Date:			
Department Designee:				
Name: Jennifer Jensen	Title: Administrator, Human Resources			
Signature:	Date:			